



**Hand-Held
Scarifiers**



Needleguns



**Walk-Behind
Scarifiers**



Impact Tools



Sanders



**Specialty
Tools**



**Industrial
Vacuums**



Model 24 Needlegun

Pneumatic



Configurations

Part	Description	Shroud
130.2246	Needlegun, System	Flat, Inside corner
130.224	Needlegun	Flat
130.2243	Needlegun	Inside corner
130.124	Needlegun	None

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Introduction

The Model 24 Needlegun is a revolutionary pneumatic tool that can be used for a wide range of jobs. The tool is lightweight and affords the user maximum ease and efficiency in a variety of applications. As with any product of a quality manufacture, service life largely depends on correct handling. These instructions are prepared to help you obtain maximum performance at all times.

Please review the following points so the needlegun will perform for many years to come.

Main Applications

- De-slugging welds
- Shot-peen profile (Capable of achieving SSPC SP-11)
- Stripping paint
- Cleaning castings
- Cleaning angles and corners
- Removing rust & corrosion
- Removing non-skid

Technical Specifications

Air Pressure	85 psi
Air Consumption	9.5 CFM
Strokes per minute	4,000 SPM
Stroke Length	5/8"
Needle Size (count)	
Standard w/gun	3mm x 7" (23)
Optional	2mm x 7" (53) or 4mm x 7" (12)
Hose Requirement	
Diameter	3/8" ID
Length	50' maximum
Weight	6.1 lbs. (without needles)
Length:	
Tool without needles	11"
Tool with needles	13-3/4"

Accessories Included: 6mm Allen wrench, hose nipple PT3/8" x 3/8" threaded adapter PT3/8" x NPT3/8

Cautions for Use



PLEASE READ AND FOLLOW ALL WARNINGS



Read Operating Instructions

Always become familiar with all the instructions and warnings before operating any pneumatic tool.

Always Wear Approved Eye Protection



Impact resistant eye protection should meet or exceed the standards as set forth in the United States ANSI Z87.1, Occupational and Educational Eye and Face Protection. Look for the marking Z87.1 on your eye protection to insure that it is an approved style. For further information, ANSI Z87.1, Occupational and Educational Eye and Face Protection, is available from the American National Standards Institute, Inc., 11 West 42nd Street, New York, NY 10036.

Hearing Protection is Recommended



Hearing protection should be used when the noise level exposure equals or exceeds an 8 hour time-weighted average sound level of 85dBA. Process noise, reflective surfaces, other tools being operated nearby, all add to the noise level present in your work area. If you are unable to determine your noise level exposure, we recommend the use of hearing protection.

Avoid Prolonged Exposure to Vibration



Pneumatic tools can vibrate during use. Prolonged exposure to vibration or very repetitive hand and arm movements, can cause injury. Stop using any tool if discomfort, tingling feeling or pain occurs. You should consult your physician before resuming use of the tool.

90 PSIG Maximum



This tool is designed to operate at an air pressure of 90 pounds per square inch gauge pressure (90 PSIG) maximum, at the tool. Use of higher air pressure can, and may cause injury. Also, the use of higher air pressure places the internal components under loads and stresses they were not designed for, causing premature tool failure. The air supply should be clean and dry, preferably lubricated. For best results, drain the moisture from your compressor daily.

Idle Running

Idle operation will shorten the life of the tool and needles and should be avoided.

Setup

Air Pressure

Maximum performance is displayed at a gauge pressure of 6kg/cm². In terms of range, this is an air pressure from 5 to 7 kg/cm² (70 to 100 psi). The recommended ideal air power is 85psi at 9.5 cfm.

Air Line

Use 3/8" air hose between the compressor and the tool. Compressed air is cooled and its water content separated as soon as it leaves the compressor. A portion of the water content, however, is condensed in the piping and can enter the tool mechanism, which may cause trouble. Always install an air filter and an oiler between the compressor and the tool. The compressor used should have 2 horsepower for the needlegun.

Air Hose

Blow compressed air through the supply hose before connecting the tool.

Lubrication

Before connecting the hose, apply four to five drops of 2135TH oil at the air inlet (no additional lubrication is required when oiler is used). Use of a thicker oil can lead to reduced performance or malfunction. If a thicker oil is used by accident, wash it away immediately.

Operation

After properly setting up the tool, air lines, air supply and work area, the scaler is ready to use. The tool will automatically adjust to surface contours to efficiently clean uneven surfaces, get into grooves, corners and gaps, clean outside and inside surfaces, and clean spaces inaccessible to other types of tools.

- Always wear safety equipment during operation.
- Check condition of tool and needles before each use.
- Clean and lubricate tool every 8 hours of operation.
- Hold the scaler upright with the needles at an angle that is slightly less than 90 degrees to the work surface.
- Always apply tool to work before pressing throttle.
- Applying a light hold down pressure will give the best results. Do not bear down. More force does not equal more productivity.
- Avoid free air operation of the tool.
- Pull the throttle valve or trigger to start working.

Changing Needles

1. Unfasten the hexagon socket head bolt using the hexagon wrench key and pull out the needle guide.
2. Loosen and remove the lock ring.
3. Take out the needle supporter by pulling out the needles.
4. Extract the needles. The needles must be changed whenever damaged during operation.
5. After changing needles, assemble in the reverse manner of disassembly.

Storage

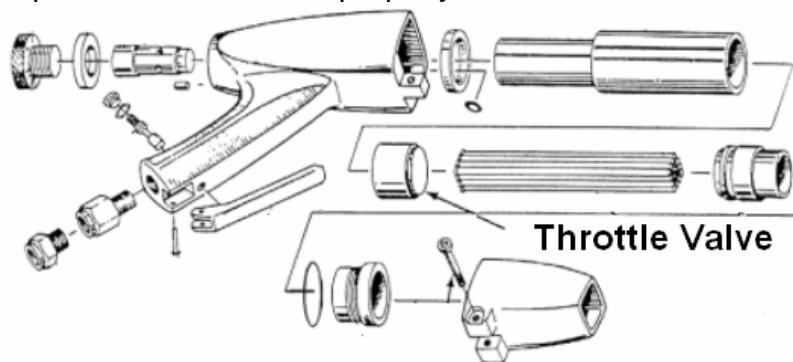
Avoid storing the tool in a location subject to high humidity. If the tool is left as it is used, residual moisture on the inside can cause rusting. Before storing, and after operation, oil the tool at the air inlet with spindle oil and run it for a short time.

Ordering Service Parts

For further operation and handling information, or for replacement of parts and components, contact the sales representative from whom you purchased the tool, or the service division of our company.

Troubleshooting

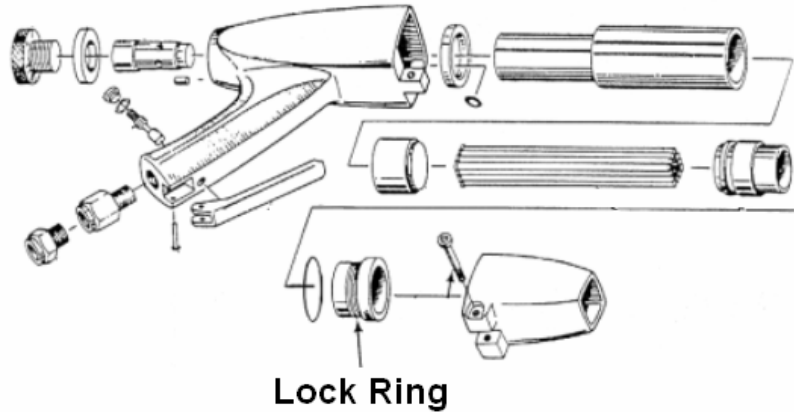
Symptom	Probable Cause
Tool Jammed	When the tool jams, the most likely cause is lack of lubrication. To correct, disassemble, clean, inspect, lubricate and reassemble. If the problem persists, please contact your Desco representative.
Needles breaking	Short needle life is often caused by the tool operator bearing down on the tool too hard. Use light hold down pressure only and let the tool do the work. Be sure to dis-assemble and replace broken needles before proceeding.
Slow performance	<p>Slow performance is usually caused by insufficient air or lack of lubrication.</p> <p>For insufficient air,</p> <ul style="list-style-type: none">• first check that your air source is putting out the required 85 psi at 9.5 cfm• Next check the air supply hose. A ½ inch diameter, 50 foot long hose is recommended. Hoses less than 1/2 inch will restrict air flow. Hose length affects air pressure; the longer the hose, the greater the pressure loss.• Finally, if using a Lubricator, Filter, Evaporator, check to see if the filter is clogged. <p>For lack of lubrication, check to see when the tool was last lubricated. Perform maintenance as necessary.</p>
Air flows, needles do not move	When air passes through the needlegun, but needles do not reciprocate, the most likely cause is the “Throttle Valve” is missing or inserted backwards. To resolve, disassemble, inspect and reassemble properly.



Symptom	Probable Cause
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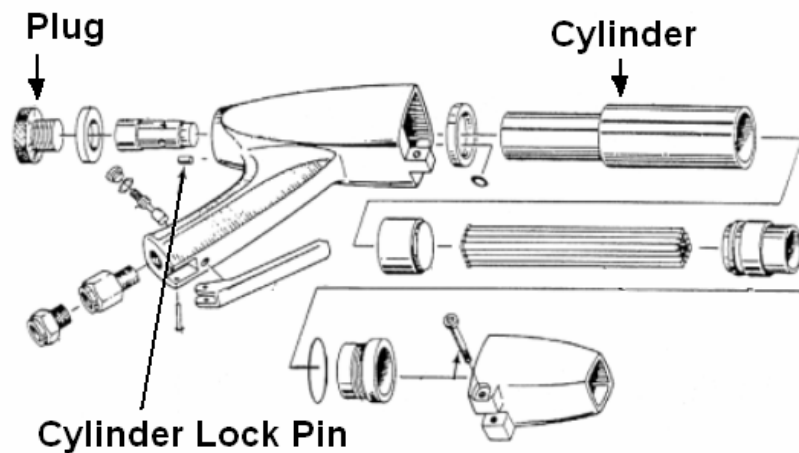
No Power

When air passes through the needlegun, and the needles do reciprocate but with little or no power, the most likely cause is a loose lock ring. To resolve, remove the needle guide nose piece and tighten the lock ring.



“Cylinder” rotates when tightening “Plug”

When the cylinder rotates while tightening the plug, the cylinder lock-pin is missing.



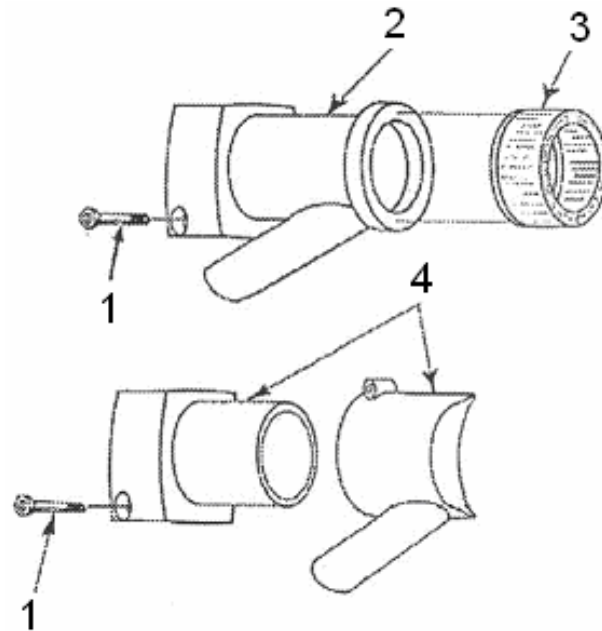
Broken needle stuck in needle holder – how to remove

Needle heads take a pounding during normal operation. As a result, sometimes a needle will break and the head will become stuck inside the needle holder. To remove, use an old needle as a punch, align with the stuck needle and tap lightly with a hammer to free the needle head.



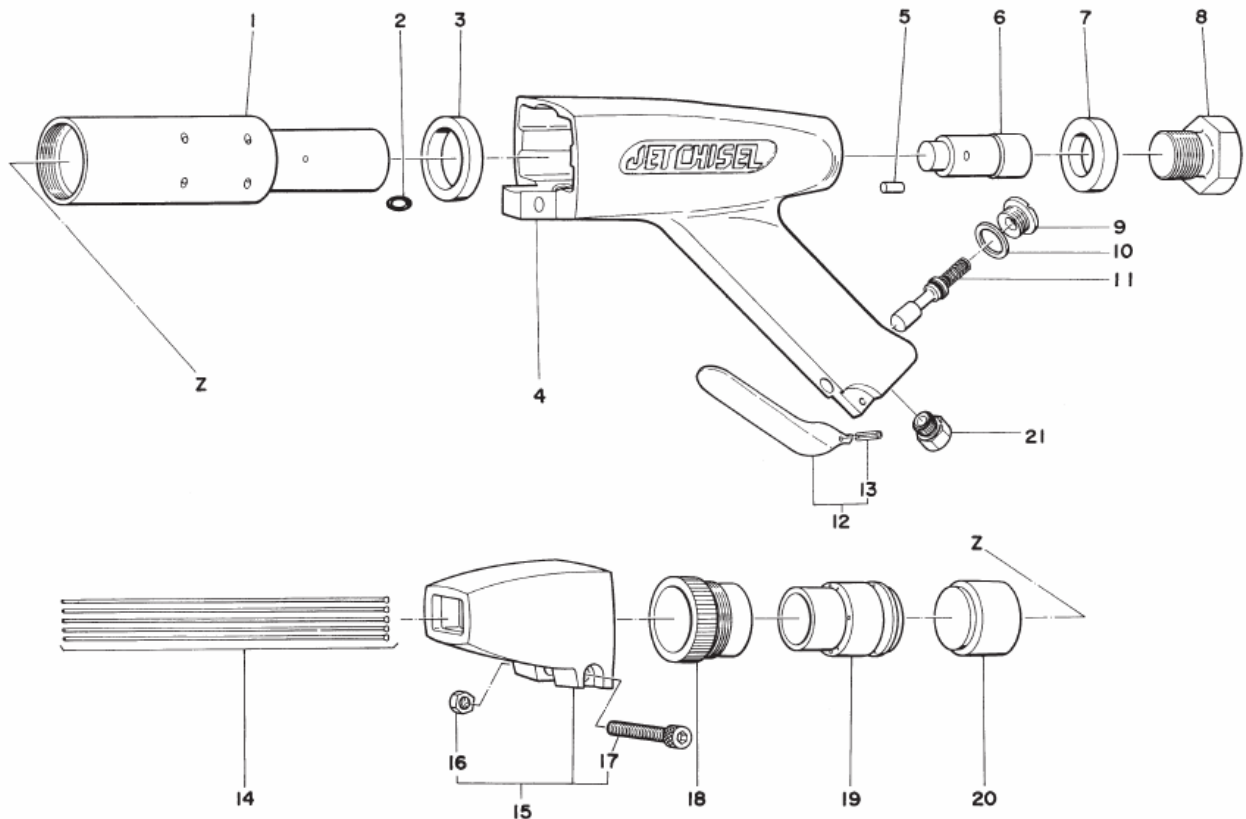
Schematics

Dust Collector Schematic



Ref	Part	Description
1	550.417	Bolt
2	130.040	Dust collector, flat style
3	500.060	Brush, replacement
4	130.041	Dust collector, inside corner style

Needlegun Schematic



Ref	Part	Description
1	550.418	Cylinder
2	550.119	O-Ring (KS-9)
3	550.416	Front Washer 34 x 46 x 7
4	550.465	Housing Sub-Asy.
5	550.411	Cylinder Lock Pin
6	550.412	Piston
7	550.415	Rear Washer
8	550.467	Rear Plug Asy.
9	550.409	Valve Cap
10	550.408	Valve Packing
11	550.477	Throttle Valve Asy.

Ref	Part	Description
12	550.1557	Throttle Lever
13	550.407	Spring Pin 3 x 20
14	130.024	Needles – 3mm x 180mm (23)
15	550.466	Needle Guide Asy.
16	550.417	Hex, Nut M8 (Set includes #17)
17	550.417	Hex, Bolt 8 x 45 (w/ #16 above)
18	550.414	Lock Ring
19	130.070	Needle Holder/Supporter – 3mm
20	550.413	Throttle Anvil/Valve
21	550.059	Reducer M16 x PT 3/8